

CLAIMS

What is claimed is:

1. A voice command (VC) to dual tone multi-frequency (DTMF) interfacing system comprising:
 - 5 a first echo canceller for echo canceling a received voice command from a caller in a first mode;
 - a translator for translating the echo cancelled voice command into a DTMF code for use by a DTMF-driven system; and,
 - a second echo canceller for echo canceling audio output sent to the caller from
10 the DTMF-driven system.
2. The system according to Claim 1, further comprising:
 - a first port for receiving a call from the caller; and
 - a second port for sending the DTMF code to and receiving the audio output
15 from the DTMF-driven system.
3. The system according to Claim 2, further comprising:
 - a port patch for connecting audio from the first port directly to the second
port in a second mode.

20

4. The system according to Claim 3, further comprising:
a tone detector for detecting a tone, in the first mode, from the DTMF-driven system to switch to the second mode.
- 5 5. The system according to Claim 3, further comprising:
a DTMF digit detector for detecting a predetermined DTMF digit, in the second mode, from the caller to switch to the first mode.
6. The system according to Claim 3, further comprising:
10 a DTMF digit detector for detecting a predetermined DTMF digit, in the second mode, from the caller to switch to the first mode and to forward DTMF codes to the DTMF-driven system when voice commands are not used.
7. The system according to Claim 3, wherein:
15 during the second mode, the audio is a voice message to be stored in a voice mailbox of the DTMF-driven system; and
during the first mode, the voice message stored in the voice mailbox can be retrieved.
- 20 8. The system according to Claim 1, further comprising:

an automatic speech recognition module for recognizing the voice command;

wherein the translator includes:

a plurality of audio files, each audio file corresponding to a DTMF tone

wherein a distinct ordered combination of the plurality of audio file is associated

5 with each voice command.

9. The system according to Claim 8, wherein the translator further comprises:

a DTMF audio file player.

10

10. A method of interacting with a dual tone multi-frequency (DTMF) driven system with voice commands comprising the method steps of:

echo canceling a received voice command from a caller in a first mode;

translating the echo cancelled voice command into a DTMF code for use by

15 the DTMF-driven system; and,

echo canceling audio output sent to the caller from the DTMF-driven system.

11. The method according to Claim 10, further comprising the steps of:

receiving a call from the caller at a first port; and

20 sending the DTMF code to and receiving the audio output from the DTMF-

driven system at a second port.

12. The method according to Claim 11, further comprising the step of:
enabling a port patch for connecting audio from the first port directly to the
5 second port in a second mode.

13. The method according to Claim 12, further comprising steps of:
detecting a tone from the DTMF-driven system, in the first mode, to switch to
the second mode; and
10 enabling the port patch, in response to the detecting step.

14. The method according to Claim 11, further comprising the steps of:
detecting a predetermined DTMF digit, in the second mode, from the caller to
disable the port patch; and
15 disabling the port patch, in response to the detection step.

15. The method according to Claim 11, further comprising the steps of:
detecting a predetermined keyword, in the second mode, from the caller to
disable the port patch; and
20 disabling the port patch, in response to the detection step.

16. The method according to Claim 15, wherein:

during the second mode, the audio is a voice message to be stored in a voice mailbox of the DTMF-driven system; and

5 during the first mode, the voice message stored in the voice mailbox can be retrieved.

17. The method according to Claim 10, further comprising the step of:

automatically recognizing the voice command;

10 wherein the translating step includes:

determining^[0] an ordered set of DTMF codes associated with the voice command, where each DTMF code has a one-to-one correspondence with an audio file containing an audio representation of that DTMF code.

15 18. The method according to Claim 17, wherein the translating step further comprises the step of:

playing the ^[0]ordered set of DTMF audio files through a port connected to the DTMF-driven system.

20